



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/489,525	01/21/00	KILLION	SIMP 0134 PU

QM02/0126

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EXAMINER

ALI, H

ART UNIT	PAPER NUMBER
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3747

DATE MAILED: 01/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/489,525

Applicant(s)

KILLION, DAVID L.

Examiner

HYDER ALI

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 15 and 21 is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1,2,7,9,10,16 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Killion (United State Patent Number 5,918,573). Killion teaches a dual pumping element fluid pump system comprising:

A primary pump (24) element having an intake port (56) that receives fluid from a fluid supply (60) and a discharge port (58);

A secondary pump (38) element having an intake port (62) that receives fluid from a fluid supply (60) and a discharge port (64);

A fluid flow control valve (54) that is in fluid communication with said primary pump element and said secondary pump element and movable between a normally open position (Fig. 2) and a closed position (Fig. 5);

A recirculation passageway (92) that connects said secondary pump element discharge port with said secondary pump element intake port;

Cross-over port (94) prevents oil cavitation in the secondary pump (38) at high speed by continuously supplying engine oil pressure to the conduit pump's recirculation circuit. The cross-over conduit (94) also ensures oil supply to the secondary pump to make up for any leakage losses to prevent overheating.

Wherein when said system is operating at low speeds, said fluid control valve is in said normally open position (Fig. 2) and said system is provided with fluid from said primary pump element discharge port and said secondary pump element discharge port;

Wherein when said system is operating at high speeds said fluid flow control valve is moved to said closed position (Fig. 5) directing said fluid from said secondary pump element discharge port through said recirculation passageway to said secondary pump element intake port,

Wherein said fluid control valve includes a first plunger (84) portion that blocks fluid flow from said fluid supply to said secondary pump element inlet port and a second plunger portion (86) that blocks fluid flow from said secondary pump element discharge port to a load when said fluid control valve is moved to said closed position (Fig. 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Killion (United States Patent Number 5,918,573) in view of Andersson et al (United States Patent Number 4,027,699). Killion has been described above. Andersson teaches at least a pair of bleeder notches (2c, 9) formed in valve body and/or housing (2b). It would have been obvious to a person having ordinary skill in this art to combine

bleeder notches as taught by Andersson et al with fluid pump as taught by Killion so that leak back mechanism includes at least a pair of bleeder notches formed in valve body and/or housing to allow fluid to leak back from load into recirculation passageway. Motivation for combining this is to prevent oil cavitation in the secondary pump.

Claims 4,8,12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Killion (United States Patent Number 5,918,573) in view of Holloway et al (United States Patent Number 4,122,868). Killion has been described above. Holloway et al teaches at least a pair of bleeder notches (116 and 116a) formed in plunger portion (56). It would have been obvious to a person having ordinary skill in this art to combine bleeder notches as taught by Holloway et al with fluid pump as taught by Killion so that leak back mechanism includes at least a pair of bleeder notches formed in plunger portion to allow fluid to leak back from load into recirculation passageway. Motivation for combining this is to prevent oil cavitation in the secondary pump.

Claims 5,6,13,14,19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Killion (United States Patent Number 5,918,573) in view of Yu (United States Patent Number 5,123,628). Killion has been described above. Yu teaches a hole (42) formed in plunger portion (41). It would have been obvious to a person having ordinary skill in this art to combine plunger hole as taught by Yu with fluid pump as taught by Killion so that leak back mechanism includes a hole formed in plunger portion to allow fluid to leak back from load into recirculation passageway. Motivation for combining this is to prevent oil cavitation in the secondary pump.

Art Unit: 3747

Allowable Subject Matter

Claims 15 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (703) 308-3949. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY YUEN can be reached on (703) 308-1946. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-7766 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

Ali
January 23, 2001

Willis R. Wolfe
Willis R. Wolfe
Primary Examiner
Art Unit 3747